5. Isidora

Program Name: Isidora.java **Input File: isidora.dat**

Isidora has just learned about bit string flicking, specifically the **left shift, right shift, left circle,** and **right circle** operations. She needs help writing a program that will correctly output the resulting binary string for one of these four operations.

She wants to use RS for Right Shift, LS for Left Shift, RC for Right Circle, and LC for Left Circle as the first part of the command. This will be followed by a dash "-", a value, then a space, and then the base ten integer value to be shifted or circulated.

For example, the command RS-4 45 will take the value 45, convert it to the binary string 101101, and then perform a Right Shift 4, which means the rightmost 4 bits are eliminated, leaving 10 as the result.

The command LS-2 13 will convert the value 13 to its binary equivalent of 1101, and perform a Left Shift 2 operation, which essentially adds two zeroes to the back of the binary string, resulting in 110100.

The circle commands result in a same size binary string as the original, with a Right Circle taking the rightmost bits and circling them to the other side, and likewise for the Left Circle, taking the leftmost digits and circling them to the other side.

For example, the command RC-3 81 will take the binary value for 81, or 1010001 in binary, take the three right most digits, 001, and circle them to the front of the string resulting in 0011010.

Input: Several commands as described above, each on one line. It is guaranteed that the command will work within the length of the string, with all results greater than or equal to zero.

Output: The resulting bit string for the command.

Sample input:

```
RS-4 45
LS-2 13
RC-3 81
```

Sample output:

```
10
110100
0011010
```